THAT WHICH IS CLAIMED IS:

1. An integrated circuit chip module comprising:

a substrate;

an integrated circuit die mounted on the substrate and having die pads and an exposed surface opposite from the substrate;

a plurality of substrate bonding pads positioned on the substrate adjacent the integrated circuit die; and

a decoupling capacitor assembly mounted on each integrated circuit die, said decoupling capacitor assembly comprising

a capacitor carrier secured onto the exposed surface of the integrated circuit die, and

a decoupling capacitor carried by the capacitor carrier; and

a wire bond extending from the decoupling capacitor assembly to a die pad and from a die pad to a substrate bonding pad.

2. An integrated circuit chip module according to Claim 1, and further comprising a plurality of decoupling capacitor assemblies mounted on said integrated circuit die.

3. An integrated circuit chip module according to Claim 2, wherein said plurality of decoupling capacitors are mounted in series along said integrated circuit die.

4. An integrated circuit chip module according to Claim 1, and further comprising an adhesive securing said decoupling capacitor to said capacitor carrier.

5. An integrated circuit chip module according to Claim 1, and further comprising an adhesive securing said capacitor carrier to said integrated circuit die.

6. An integrated circuit chip module according to Claim 1, wherein said capacitor carrier is formed from an aluminum nitride substrate.

7. An integrated circuit chip module according to Claim 6, wherein said aluminum nitride substrate ranges in thickness from about 5 mil to about 50 mil.

8. An integrated circuit chip module according to Claim 1, wherein a wire bond extends from said decoupling capacitor to a logic pin of said integrated circuit die.

9. An integrated circuit chip module according to Claim 1, wherein a wire bond extends from said capacitor carrier to a logic pin of said integrated circuit die.

10. An integrated circuit chip module comprising:

a substrate;

an integrated circuit die mounted on the substrate and having die pads and an exposed surface opposite from the substrate;

a plurality of substrate bonding pads positioned on the substrate adjacent the integrated circuit die; and

a decoupling capacitor assembly mounted on the integrated circuit die, said decoupling capacitor assembly comprising

a capacitor carrier secured onto the exposed surface of the integrated circuit die,

a decoupling capacitor carried by said capacitor carrier;

a thin film metallization layer positioned on said capacitor carrier; and

a conductive adhesive layer engaging said decoupling capacitor and thin film metallization layer and securing said decoupling capacitor to said capacitor carrier;

a wire bond extending from the thin film metallization layer to a logic pin of the integrated circuit die and from a logic pin to a substrate bonding pad.

11. An integrated circuit chip module according to Claim 10, and further comprising a plurality of decoupling capacitor assemblies mounted on said integrated circuit die.

12. An integrated circuit chip module according to Claim 11, wherein said plurality of decoupling

capacitors are mounted in series along said integrated circuit die.

13. An integrated circuit chip module according to Claim 10, and further comprising an adhesive securing said decoupling capacitor to said capacitor carrier.

14. An integrated circuit chip module according to Claim 10, and further comprising an adhesive securing said decoupling capacitor assembly to said integrated circuit die.

15. An integrated circuit chip module according to Claim 10, wherein said capacitor carrier is formed from an aluminum nitride substrate.

16. An integrated circuit chip module according to Claim 15, wherein said aluminum nitride substrate ranges in thickness from about 5 mil to about 50 mil.

17. An integrated circuit chip module according to Claim 10, wherein a wire bond extends from said capacitor to a logic pin of said integrated circuit die.

18. An integrated circuit chip module according to Claim 10, and including a bonding pad on said thin film metallization layer for securing a wire bond.

19. A multi-chip module comprising:

a ceramic substrate;

a plurality of integrated circuit die mounted on the ceramic substrate, each integrated circuit die including die pads and an exposed surface opposite from the ceramic substrate;

a plurality of substrate bonding pads mounted on the substrate adjacent the plurality of integrated circuit die; and

a plurality of decoupling capacitor assemblies positioned on each integrated circuit die, each decoupling capacitor assembly comprising

an aluminum nitride capacitor carrier secured onto the exposed surface of the integrated circuit die, and

a decoupling capacitor carried by the capacitor carrier; and

at least one wire bond extending from each decoupling capacitor assembly to a logic pin and from a logic pin to a substrate bonding pad.

20. A multi-chip module according to Claim 19, wherein said ceramic substrate is formed from a plurality of green tape layers.

21. A multi-chip module according to Claim 19, wherein a wire bond extends from said capacitor to a logic pin of said integrated circuit die.

22. A multi-chip module according to Claim 19, wherein a wire bond extends from said capacitor carrier to a logic pin of said integrated circuit die.

23. A multi-chip module according to Claim 19, wherein said aluminum nitride substrate ranges in thickness from about 5 mil to about 50 mil.

24. A multi-chip module according to Claim 19, wherein said plurality of decoupling capacitors are mounted in series along said integrated circuit die.

25. A multi-chip module according to Claim 19, and further comprising an adhesive securing said decoupling capacitor to said capacitor carrier.

26. A multi-chip module according to Claim 19, and further comprising an adhesive securing said decoupling capacitor assembly to said integrated circuit die.

27. A multi-chip module according to Claim 19, wherein said plurality of decoupling capacitors are mounted in series along said integrated circuit die.

28. A decoupling capacitor assembly used for decoupling integrated circuit die comprising:

a capacitor carrier formed as an aluminum nitride substrate that is about 5 mil to about 50 mil thickness;

a decoupling capacitor carried by said capacitor carrier; and

an adhesive securing said decoupling capacitor to said capacitor carrier.

29. A decoupling capacitor assembly according to Claim 28, and further comprising a thin film metallization layer formed on the capacitor carrier, wherein said adhesive comprises a conductive adhesive for conducting current between said capacitor and said capacitor carrier.

30. A decoupling capacitor assembly according to Claim 28, and further comprising a bonding pad positioned on said capacitor carrier for connecting a wire bond thereto.

31. A decoupling capacitor assembly according to Claim 28, and further comprising a bonding pad positioned on said decoupling capacitor for connecting a wire bond thereto.

32. A method of forming an integrated circuit chip module comprising the steps of:

adhesively securing a decoupling capacitor onto a capacitor carrier to form a decoupling capacitor assembly;

adhesively securing the decoupling capacitor assembly onto an integrated circuit die that had been mounted onto a substrate; and

wire bonding from the decoupling capacitor assembly to the integrated circuit die and from the integrated circuit die onto substrate bonding pads positioned on the substrate.

33. A method according to Claim 32, and further comprising the step of forming a thin film metallization layer on the capacitor carrier, and adhesively securing the decoupling capacitor with a conductive adhesive that engages the thin film metallization layer, and wire bonding from the capacitor carrier to the integrated circuit die.

34. A method according to Claim 32, wherein the wire bonding from the decoupling capacitor onto the integrated circuit die.

35. A method according to Claim 32, and further comprising the step of forming the capacitor carrier as an aluminum nitride substrate that is about 5 mil to about 50 mil thickness.

36. A method according to Claim 32, and further comprising the step of forming the substrate as a ceramic substrate.

37. A method according to Claim 32, and further comprising the step of forming the substrate as a polymeric substrate.